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ABSTRACT

This case study involved designing an electronic-based environment to explore the effectiveness of electronic mail (e-mail) as a writing tool for dialogue journaling. The setting for this study was an intermediate-level reading and writing class in the American English Institute Program on the campus of a large public university. Over a period of 9 weeks, six randomly chosen English-as-a-Second Language (ESL) students in the class wrote dialogue journals to their instructor using e-mail while the rest of the students in the class wrote dialogue journals to the instructor using paper and pencil. The issues investigated were: What were the students' attitudes toward dialogue journal writing via e-mail? What was the instructor's perception regarding e-mail dialogue journal writing? What problems occurred in the process of using e-mail as a tool for doing dialogue journal writing? In what ways were e-mail journals different from paper journals? The findings of the study show that a variety of factors combined to exert an influence on the participants' attitudes towards e-mail. Limited knowledge about e-mail systems prevented some students from taking a full advantage of e-mail as a unique communication tool. Comparison of e-mail journals and paper journals reveals that e-mail created a different writing style than that of paper and pencil. For example, in the journal entries, participants in the e-mail group tended to: (1) use formula functions like opening and closing greetings (none of the students in the paper group used any); (2) use more requesting functions (asking questions) than those in the paper group; and (3) produce more language functions per writing session. In addition, e-mail communication was more spontaneous than paper dialogue. (Contains 38 references.) (Author/SWC)

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Title:

E-mail Dialogue Journaling In an ESL Reading and Writing Classroom

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Abstract. This case study involved designing an electronic-based environment to explore the effectiveness of electronic mail (e-mail) as a writing tool for dialogue journaling. The setting for this study was in an intermediate level reading and writing class in the American English Institute Program on the campus of a large public university. Over a period of nine weeks, six random assigned English as a second language (ESL) students in the class wrote dialogue journals to their instructor using e-mail while the rest of the students in the class wrote dialogue journals to the instructor using paper and pencil. The issues investigated were: What were the students' attitudes toward dialogue journal writing via e-mail? What was the instructor's perception regarding e-mail dialogue journal writing? What problems occurred in the process of using e-mail as a tool for doing dialogue journal writing? In what ways, were e-mail journals different from paper journals? The findings of the study show that a variety of factors combined to exert an influence on the participants' attitudes towards e-mail. Limited knowledge about e-mail system prevented some students from taking a full advantage of e-mail as a unique communication tool. Comparison of e-mail journals and paper journals reveals that e-mail created a different writing mode than that of paper and pencil.

Literature Review

A dialogue journal is a daily written communication between two persons. In the classroom setting, the teacher and the student are the two partners involved in this written conversation. Each day, the student puts an entry into a bound notebook and hands in the notebook to the teacher. Students are not assigned a topic to write about. They can write about anything of personal interest and concern. Instead of grading or correcting the student's writings, the teacher writes an individual response to the student's entry. The next day, the teacher gives the notebook back to the student so that the interchange can continue. The written exchange can develop into a year-long daily conversation between the teacher and the student.

Since its first discovery as a classroom practice in 1979, dialogue journaling has been widely used in writing classrooms of English as a second language (ESL) to help students develop their writing skills (Jones, 1988). Peyton and Seyoum (1989) pointed out that dialogue journaling "held promise as a way to promote the writing development of limited English proficient students" (p. 310). Research shows that dialogue journaling is an effective way to help improve ESL student writing (Blanton, 1987; Gross, 1990; Gunkel, 1991; Gutstein, 1983; Reyes, 1991; Peyton, Staton, Richardson & Wolfram, 1990; Rinvolucri, 1983; Spack & Sadow, 1983; Staton, 1988; Staton, Shuy, & Kreeft, 1982; Steer, 1988; Urzua, 1987; Venditti & Bahruth, 1986).

To date, the communication medium used for dialogue journaling has been paper and pencil. The advent of widely available computers and telecommunications has created opportunities to take dialogue journal writing one step further through use of e-mail.

E-mail is a unique communication medium. "It differs from any other communication in time, space, speed, ease of use, fun, audience, and opportunity for feedback "(Kiesler, 1984; p. 1127). As a written communication medium, e-mail not only allows the writer to interact with the text via the computer, but also makes it possible and easy for writers to interact with each other via the computer. E-mail enhances the communication between writers by transferring their writings to each other almost spontaneously. Equipped with word processing capabilities, e-mail smoothes the writing process of the writer. Thus, the computer becomes "a communication channel as well as a writing tool" (Daiute, 1985, p. xiv).

E-mail has been reported as an effective communication medium in a variety of educational settings. Surveys conducted across campuses in the United States reveal that teachers and students use e-mail as a communication tool to fulfill their personal needs. E-mail is used for exchanging information, discussing opinions, and socializing with people (Grabowski, 1990; Rice & Case, 1983). A survey by Schaefermeyer and Sewell (1988, p. 119) identified the advantages of e-mail as "speed, " "convenience, " "time-saving, " and "asynchronicity." Grabowski (1990, p. 280) identified the reasons for using e-mail as : "no time/place limits," "easy access," "knowledge of computers," "ease of use," "convenience," and to "try new things." These surveys indicate that e-mail is perceived by teachers and students as an accepted and valuable tool for personal communication.

E-mail communication is sometimes added to the regular classroom in the hope of increasing the interaction between teachers and students, and thus improving the quality of the learning environment. Studies report that students demonstrate an overwhelming acceptance of e-mail as a supplement to traditional modes of instructor-student interaction (Downing, Schooley, Matz, Nelson & Martinez, 1988; D'Souza, 1991; Hartman et al, 1991; Kinkead, 1987). Students described e-mail as "quick, convenient, and fun" (Kinkead, 1987, p. 338). The teachers interacted more frequently with their students using e-mail than they did in face-to-face or paper communication (Hartman et al, 1991). Students asked more challenging and more thoughtful questions, and the instructor's responses to these questions were often of higher quality than those they provided in face-to-face interaction (Downing, Schooley, Matz, Nelson & Matinez, 1988). The

quality of instruction and student test scores improved because of the increased interaction between instructors and students (D'Souza, 1991).

E-mail expands the communication circles of the learner beyond the boundaries of the classroom and the campus. The learner is provided access to global communication and empowered in the learning process. Jenkinson (1992) reported a study on e-mail communication between a university professor and 20 students (fourth through seventh graders). The students sent their stories to the professor. The professor critiqued their stories via a home computer and sent suggestions back to the students. Most of the students revised their writings following the professor's suggestions.

E-mail links students together from different cultures. The Intercultural Learning Network is an international computer network that was developed to provide students from different cultures the opportunity to work together on joint educational activities (Cohen, 1986). Students in Mexico, Japan, Israel, and the United States participated in the project. The students in Japan used English, the second language they were studying, to complete their projects. Students showed a great motivation to use English to communicate through network activities. Test scores demonstrate that the students in Japan gained English proficiency through these network activities. The students agreed that the language they learned in networking activities was a living language.

In the study conducted by Soh and Soon (1991), two groups of teenage students from two cultures (Singapore and Canada) communicated via e-mail. Researchers found that the students learned to write clear and effective prose to communicate their ideas and concepts. In addition, the students learned that the computer can be an effective communicative tool as well as a learning tool.

Although a search of literature failed to locate any research on using e-mail as a writing medium in dialogue journaling, the literature discussed above establishes the educational value of using e-mail and dialogue journaling on paper as educational tools. The present study involved designing an electronic-based dialogue journaling environment to explore whether the two tools can be combined to create an effective learning environment in the ESL writing classroom.

The Study

This case study involved designing an electronic-based environment to explore the effectiveness of e-mail as a writing tool for dialogue journaling. The issues investigated were: What were the students' attitude toward dialogue journal writing via e-mail? What was the instructor's perception regarding e-mail dialogue journal writing? What problems occurred in the process of using e-mail as a tool for dialogue journaling? In what ways, were e-mail journals different from paper journals?

Setting and Participants

The setting in the present study was an intermediate level reading and writing class in the American English Institute (AEI) on the campus of a large public university. The research covered a period of nine weeks.

There were fourteen students in the class. Half of the students were randomly assigned to the e-mail group, taking into consideration of gender and nationality.. The other half of the students in the class were assigned to the paper-and-pencil group.

It needs to be pointed out that one student was included into the e-mail group as a special case. Two weeks after the project started, one student from the e-mail group dropped. One student (Hiroko) from the paper group volunteered to join the e-mail group. Since the nature of this research is qualitative, the researcher gave her the permission. Another consideration was that it might contribute insightful information to the study to have a subject who had experience using both medium.

During the term, some students dropped the class, some students had long illness and some students had poor attendance. These students were excluded from the sample in the present study. The final student samples are shown in table 1 and table 2.

TABLE 1. Student Sample (E-mail Group)

Student	Nationality	Gender	Final grade for the term
Ying	Taiwan	Female	88.8
Lin	Taiwan	Male	90.5
Toshi	Japan	Male	67.8
Tamiko	Japan	Female	85.3
Hiroko	Japan	Female	91.6
Andi	Indonesia	Male	81.0

TABLE 2. Student Sample (Paper and Pencil Group)

Student	Nationality	Gender	Final grade for the term
Meimei	Taiwan	Female	84.0
Shen	Taiwan	Female	92.0
Atzko	Japan	Female	90.8
Hiro	Japan	Male	75.3

Dialogue Journal Writing Procedure

The students in both groups wrote dialogue journals outside of class time. The students in the e-mail group sent their dialogue journals to the instructor by the use of e-mail every day. They used the computer lab in AEI program on the campus. The students in the paper-and-pencil group wrote their dialogue journals on pieces of paper and handed them in to the instructor every morning before the class started.

The instructor used e-mail to write to the students in the computer group and an electronic typewriter to write to the students in the paper group.

Data Collection

A triangulation strategy was used for data collection in the present study. Data collection methods in the present study included: (a) classroom and lab observation; (b) interviews; and (c) the collection of the dialogue journals written by the students and the instructor in both e-mail group and paper group.

Classroom observation

The researcher attended the class three times a week to do classroom observations. Detailed field notes were taken during the observations on how the class was organized, how the instructor interacted with the students, and what activities the students did in the class. Participant observation allowed the researcher to view the research in a broader context and provided the researcher a better understanding of how other factors might affect the results of the research.

Interviews

The researcher did informal interviews with the students and the instructor before class started or during class breaks. A semi-structured interview was conducted at the end of the project and follow-up telephone interviews were conducted four months later after the project was over.

Collection of the dialogue journals

An aliases file was built into the e-mail account of each student and the instructor in order to collect the dialogue journals written by the students and the instructor via e-mail. The aliases were designed so that the dialogue journal entries written by the students and the instructor via e-mail were automatically sent to the researcher as well as to their specified receiver.

The paper journals were collected weekly. Each Friday the students in the paper group were required to bring all the journals they wrote during the week and hand them in to the instructor. The instructor made copies of the paper journals and gave the copies to the researcher.

Data Analysis

Data analysis was based on interviews, field notes, and the written dialogue journals (e-mail and paper and pencil) produced by the students and the instructor. Data was categorized and organized to describe the subject's attitude towards using e-mail as a medium for writing the dialogue journal and the problems that the participants encountered in the process of using e-mail.

To compare e-mail journals and paper journals, Shuy's model on sentence level language function serve as the guideline for coding the dialogue journals. Language functions are the ways in which people use language to get things done: "They may want to tell something, to answer a question, complain, apologize, promise something, or any number of other things. These are all referred to as language functions" (Shuy, 1988, p. 107). Shuy (1982, 1988) developed his model in analysis of the dialogue journals written by a teacher and 10 students over a period of two weeks in the fall and in the spring. "This analysis of language functions is based on the strong belief that language functions are a more effective measure of writing abilities than any existing measure of language forms" (Shuy, 1988; p.142). Ten frequently-used language functions were identified in the dialogue journals in the present study: (a) reporting opinion, (b) reporting personal facts, (c) reporting general facts, (d) responding to questions, (e) predicting, (f) complaining, (g) giving directives, (h) apologizing, (i) thanking, (j) offering, (k) promising, and (l) requesting.

The reliability of data coding was checked by hiring the other coder to code the data. One hundred-twenty sentences (2%) were randomly selected. The methodology used for random selection was stratified random sampling. First, the total number of the sentences was divided by the number of the sample to be selected (5812/120=48). Second, the sentences were grouped according to the categories of language functions. Different categories of language functions were entered into different computer files. Third, the sample was selected consisting of each 48th sentence in each category of language functions.

After the training, the coder coded the data independently according to the coding rules. The results of his coding showed that out of 120 sentences, the coder correctly coded 106 sentences The reliability of the data coding in the present study was 88.3% (106/120=.883).

Findings and Discussions

Attitude towards using e-mail in dialogue journaling

Five out of six students expressed a positive attitude towards using e-mail in dialogue journaling. They were Lin, Andi, Hiroko, Toshi and Ying. They preferred using e-mail to using paper and pencil. Ying enjoyed using e-mail, but she mentioned she would not mind using paper and pencil as well in writing dialogue journals. These students commented that e-mail is fast, fun and convenient. Tamiko held an attitude of total rejection towards using e-mail.

Both Lin and Andi had computer background and typing skills. They expressed positive attitudes towards the use of e-mail. Based on observations in the computer lab during e-mail training, both students handled the dialogue journal typing task with ease. Each of them spent about 10 minutes a day in writing their dialogue journals. The 10 minutes figure is in sharp contrast with the average of 30 minutes spent by the other e-mail users and the paper-and-pencil students. These two students enjoyed using e-mail because they were familiar with the computer technology and they did not have difficulties in typing. They felt it was easy and convenient for them to write via e-mail.

> When I use e-mail, I have enough time and it is easier to edit. I feel it is better for me. I feel it is very troublesome to write by hand. When I write by hand, I have to erase by using the eraser. After that, I have to try to make the paper look clean. I really feel it is very troublesome to do so. My handwriting is very poor. It was also faster for me to write by the computer than to write by hand. (Lin)

Researcher: *What did you like most about e-mail writing?*

Andi: *Typing.*

Researcher: *Typing?*

Andi: *Yes.*

Researcher: *You like typing better than handwriting? You'd rather type than to write by hand?*

Andi: *Yes.*

Among the students who did not have computer background and typing skills, Toshi, Hiroko and Ying expressed positive attitudes towards e-mail. Toshi, Hiroko and Ying were very enthusiastic about learning the computer technology and typing skills. During the interviews, these three students identified that by doing e-mail dialogue journals, they could learn typing and computer technology. The following excerpts of their dialogue journals indicated that they thought that it was important for them to learn the computer technology and typing skills for their future careers. Their attitude towards e-mail was affected by their desire to learn the computer technology and typing skills which they considered relevant to their career goals.

(Ying)
It is a nice thing that I can talk to you by using my fingers. This is a very special experience to me. If I can be a regular student, I might have my own e-mail account. I hope I still can talk with you.

(Hiroko)
Hi! This is Hiroko. This is the first time to send you my letter. Since I only learned how to use computer yesterday, I ought to be at a loss. However, I think it's very important to learn to use computers which are indispensable to future. And that, secretary whom I want to be also need the skills of using computer. Now it is the time to learn it. I will do my best!! See you.

(Toshi)
I am sorry. I forgot to reply your message. Here are my answers. I like to use computer. Therefore, I used computer every day. Also, I like to write something. So, I hope that I want to use computer next term. I was looking for use computer and to communication by write to American people. If you can do this program next term, please tell me.

E-mail participants considered it an advantage that they did not need to coordinate a time to communicate with each other, they did not need to deal with paper work and they could concentrate on their writing in an e-mail environment.

I saw another group turned in their journals early in the morning in class every day. I feel it is very troublesome. I don't like to do that. It turns the dialogue journal writing into formal homework. It is very convenient for me to use the computer. All I need to do is to turn on the computer. (Lin)

Andi: *... because when I was writing in my apartment, I leave my writing, and I'll go anywhere. After that, I'll continue again. Then I have something to do, and then back to write.*

Researcher: *So you think there are lots of distractions at home? But with the computer, you can concentrate, just ten minutes?*

Andi: *Yeah, just ten minutes.*

Researcher: *OK. What inconvenience does e-mail bring to your writing?*

Hiroko: *Eh....*

Researcher: *Compared with writing by paper and pencil?*

Hiroko: *Oh. I think writing in paper is more inconvenient. I think e-mail is more convenient.*

Researcher: *Can you tell me why?*

Hiroko: Because, I do not need to prepare drafts. Paper writing, I have to write the day before. In the morning, I have to submit to the instructor. But e-mail is...can send thinking fast...I think e-mail is more convenient.

Tamiko held a negative attitude towards using e-mail as a writing medium in dialogue journaling. She thought e-mail is "so so." She did not like to use e-mail to write her dialogue journal. She felt the computer letters were impersonal. In addition, she even did not want to consider using e-mail as a communication tool in the future.

Another frustration that Tamiko felt about using e-mail was that she could not make corrections, even when she found the mistakes while she was writing via e-mail:

Tamiko's view about errors affected her attitude towards the dialogue journal. She had considerable anxiety about the errors she made in her writing. From the very beginning, she requested the instructor to correct her writing errors in her dialogue journals:

(Tamiko)
Hello! Karen. How are you. I am very fine now, because I am done all my class and test. However I already found some mistakes. By the way, I have question. I don't know what should I do for my free-writing [the dialogue journal]. I think I always have many mistake in my writing. However I don't know what is my mistake. So, could you tell me about that? See you next Monday. Have a nice weekend! Bye!

Tamico's attitude towards e-mail was affected by her error phobia, her attitude towards dialogue journaling and this was compounded by her lack of typing and computer skills.

If viewed from a broader context, Tamico's attitude was affected by a powerful reality: the TOEFL test, a test required for all foreign students who want to be admitted to universities and colleges in North America. The classroom observation indicated that the classroom instruction was attuned to the requirements of the TOEFL test, that focuses on grammar and vocabulary. The approach of dialogue journaling in language learning, however, is in conflict with preparing to pass a TOEFL test. In informal interviews and in their journal entries, the students openly expressed their worries about spending too much time writing dialogue journals which was irrelevant to preparation for the TOEFL test. Comparatively speaking, the students in the e-mail group were facing a greater challenge than the students in paper group. The students in e-mail group had to handle an entirely new writing environment.

The instructor enjoyed using e-mail to conduct dialogue journaling. When asked to compare the two mediums, the instructor thought she had better communication with the students in the computer group than with the students in the paper group. In fact, she spent more time writing to the students in the computer group.

Karen: I think I spend more time on the computer group. And it was direct communication. They wrote to me and I wrote back, the same topic, back and forth, back and forth. Well, with the paper group, we were discussing one topic on Monday and what I received on Tuesday morning was a different topic, so sometimes I did not have too much to say, and then they go back on Monday's topic, but I would forget what I said on Monday. So it wasn't a good flow of communication with the paper group.

Researcher: So which group do you spend more time writing to?

Karen: With the e-mail group, I think.

Researcher: Oh. You spend more time because you have something to say to them?

Karen: Yeah. Because I would ask them questions and they responded to the questions, back and forth, back and forth. But with the other group, I asked them questions on Monday, and I wouldn't get response till Wednesday. So it just didn't seem as communicative as e-mail.

Another reason why the instructor liked to use the computer for dialogue journaling was that she could have all the students' writings saved in the computer, and it was convenient for her to refer to what the student had previously written.

Researcher: How would you compare the two different mediums? You are using the computer and you are using typewriter.

Karen: How would I compare them?

Researcher: Yeah. The computer medium and the paper medium.

Karen: OK. I have not thought about this before. I prefer the computer for almost everything that I do, but I don't know exactly why. If I say it saves time, then it is true. But I don't know if it was expected to save time.

Researcher: Did you feel it was troublesome to exchange folders with the paper group every day?

Karen: But I have been doing this so long. You know, it would be nice not to have to distribute folders every day, collect and return. That sounds good. I know one thing that I like better about the computer is that I can keep all their writings in the folders, that I can look at them at any time, whereas the paper group, once they took back their papers, I never saw them again. So I can go back in their folders, I can look three or four days back if I wanted to, but I could not do that with the paper group.

It is obvious that each individual's attitude toward e-mail was affected by a variety of factors, such as personal computer background, typing skills, perception of the writing process, attitude toward learning technology, and a sense of relevance of the present project to their imminent academic goals and future academic goals. These factors combined together to exert an influence on their attitude toward e-mail as a writing medium in dialogue journaling. No single factors alone determined their attitude.

Problems encountered in using e-mail

Typing

The students who did not have typing skills usually spent about thirty minutes in writing a dialogue journal entry. Ying spent an even longer time than that. She thought that one of the reasons why she spent so much time writing every day was that she typed slowly. Both Toshi and Hiroko reported that they spent time thinking about keyboarding while they were writing.

Limited Access to the Use of Computers

All the students in the study reported that sometimes a computer was not available to use when they went to the computer lab to write. During the fall term, the computer lab in the AEI program was very crowded. There was always a line of students waiting to use the computers. Tamiko reported that she twice missed writing because she could not get access to a computer. Other students reported that they had to spend a lot of time waiting in lines.

E-mail System

Some of the students felt frustrated with the editing functions provided by the e-mail system. The e-mail system used for the present study did not provide the types of editing functions and other aids to writing that one finds in a modern word processor. The students could not use a spelling checker to correct their spelling. The students could not use the computer mouse to move the cursor to the places where they wanted to make changes. They had to use the arrow keys to move the cursor line by line to the place they wanted to make changes. Often the appearance of the whole screen display was spoiled when changes were made.

However, it needs to be pointed out that this editing problem is specific to the e-mail system involved in the present study. It should not be generalized to other e-mail systems.

Students' dissatisfaction with the e-mail system sometimes was not caused by the system itself, but by their limited knowledge about the system. For example, Ying mentioned that she could not refer to the journal entries she had previously made, because they had been sent on to the teacher. Actually, it would have been quite easy for her to save a copy of each message she sent. These e-mail difficulties suggest that the initial training, although adequate to get students started, needed to be supplemented by additional training. The additional training needs to review important features that students have not learned to use, and to present additional features that they may find useful.

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The Computer System Malfunctioned

A few times, the participants reported that the computer system malfunctioned. The researcher did not work with the students in the computer lab all the time, so it was difficult to identify what the specific problems were. Problems might be caused either by the computer network system or by inappropriate operations on the part of the student. The computer problems caused frustration for the students, because most of them did not have any computer background. It should be noted that the computer problems happened very infrequently. Generally speaking, the computer network system functioned well throughout the study.

Differences between e-mail journals and paper journals

The comparison of the language functions used in e-mail journals and paper journals revealed three patterns. The participants in the e-mail group tended to use formula function, requesting function, and tended to produce more language functions per writing session compared with the participants in the paper group. Supported by the other findings of the differences between e-mail journals and paper journals, the present study indicated that e-mail created a different writing mode when it was used for dialogue journaling in a classroom setting.

Formula Functions

Formula Functions refer to openings and closings in dialogue journal entries. The students in the e-mail group tended to use formula functions while the students in the paper group did not (see table 3). The students in the e-mail group often greeted the instructor at the beginning of their writings: "Hi! How are you today?", "Good morning, Karen.", "Hello, Karen, this is Lin.", "Hi! This is Toshi. How are you doing?". They used closings at the end of their writings: "See you tomorrow," "See you in class," "Bye-bye," "Have a good day." None of the students in the paper group used any of these formula functions.

The instructor used more formula functions in writing to the students in the e-mail group than did she to the students in the paper group (see table 4).

TABLE 3. Ranked Comparison of Formula Functions Used by the Students in the Two Groups

Student	Opening N	Closing N	Total N	Formulas Per Writing Session N
E-mail Group				
Lin (36)	60	28	88	2.44
Tamiko (38)	53	55	88	2.32
Ying (47)	11	45	56	1.19
Toshi (42)	14	22	36	0.86
Hiroko (24)	1	9	10	0.42
Andi (29)	0	0	0	0.00
M=	23.17	26.5	46.33	1.21
Paper and Pencil Group				
Atzko(37)	0	0	0	.00
Shen (37)	0	0	0	.00
Meimei (27)	0	0	0	.00
Hiro (20)	0	0	0	.00
M=	0	0	0	.00

Note: Numbers in parentheses are the total numbers of writings each student did in the program.

TABLE 4. Ranked Comparison of the Formula Function "Closing" Used by the Instructor Per Writing Session in Response to the Students in the Two Groups

Instructor to Student	Closing (Total Numbers) N	Numbers Used Per Writing Session N
E-mail Group		
Lin (36)	15	.42
Ying (47)	14	.30
Toshi (42)	11	.26
Tamiko (38)	11	.29
Hiroko (24)	5	.21
Andi (29)	5	.17
Paper and Pencil Group		
Atzko(37)	4	.11
Shen (37)	4	.11
Meimei (27)	2	.07
Hiro (20)	0	.00

The finding that the students in the paper group did not use formula functions agrees with the findings of previous studies conducted on paper journals. In both Shuy's studies (1982, 1988) and Gutstein's study (1983), the students used formula functions infrequently in their paper-and-pencil dialogue journals.

Due to its perceived speed, e-mail writing in fact closely parallels a phone conversation or face-to-face conversation (Baron, 1984; Bolton, 1991; Dubin, 1991; Murray, 1991). In a phone conversation or face-to-face conversation, people frequently use formula functions.

Though the participants in the e-mail group tended to use formula functions in their writings, they did not consider it a rule for them to follow. They were flexible in using formula functions. Sometimes they used both openings and closings. Sometimes, they used only openings or only closings. One student never used any openings and closings in his messages.

Requesting Functions

Another obvious difference is that the students in the computer group asked more questions than did the students in the paper group (see table 5).

TABLE 5. Ranked Comparison of Questions Asked by the Students in the Two Groups

Student	Total Questions N	Questions Per Writing Session N
E-mail Group		
Ying (47)	57	1.21
Hiroko (24)	27	1.13
Tamiko (38)	21	0.55
Andi (29)	15	0.52
Toshi (42)	17	0.40
Lin (36)	12	0.33
M=	24.83	0.69
Paper and Pencil Group		
Atzko(37)	12	0.32
Shen (37)	9	0.24
Meimei (27)	3	0.11
Hiro (20)	0	0.00
M=	6	0.17

This finding is consistent with the findings of previous studies conducted on using e-mail as a communication medium in a variety of settings. The previous studies indicate that e-mail users tend to ask questions and seek information in e-mail writings. Rice and Case (1983) did a study on the patterns of e-mail communication among e-mail users on the campus of a university. They found that the highest uses of e-mail were to exchange information (100%), ask questions (95%), discuss opinions and keep in contact (84%). Schaefermeyer and Sewell (1988) conducted a survey on how e-mail was used among e-mail users on BITNET (one of the largest academic networks in the world). The results of their survey showed that the major use of e-mail was to seek information. Grabowski et al. (1990) conducted another study on the use of e-mail among graduate students in a university. They found that exchanging academic information (100%) and discussing ideas (63%) comprised the highest uses of e-mail in the population of their study. Sherblom (1988) did a content analysis of the e-mail messages received by a middle-level manager in a large organization over the period of several months. The findings of the study showed that requesting information and providing information comprised the largest part of the content of all the e-mail messages received by the manager.

The fact that e-mail participants tended to ask more questions could be due to their perceptions of the medium. E-mail is fast. When a person asks questions, the usual desire is to receive responses as quickly as possible. The e-mail user may have a perception that a message is being sent rapidly and is immediately received by the addressee. This perception of speed fits the student's need to get immediate responses to their questions. In actuality, the instructor only responded to the student's writing once a day. The students usually got the responses from the instructor the next day. It is the students' perception of the medium that facilitated question asking.

The perception of speed may be linked to the feeling that once an e-mail message is sent, a communication task has been completed. This perception contrasts with writing on paper where it is possible to continue to make additions until the paper is physically turned in to the teacher. This delay might account for the fact why the paper group students asked so few questions.

Overall Language Functions

Comparison of the language functions used in the e-mail dialogue journals and the paper dialogue journals indicated that the students in the e-mail group either produced as many language functions or they produced more language functions per writing session than did the students in the paper group (see table 6). The instructor produced a greater number of language functions per writing session in the e-mail group than in writing to the students in the paper-and-pencil group (see table 7).

The conversational and informal style of e-mail dialogue journaling might have encouraged the students and the instructor to write more. E-mail dialogue journaling is closer to oral communication than paper dialogue journaling is. E-mail participants do not need to pay as much attention to the rules that are required in formal writings. In Kinkead's study, she observed the conversational nature of e-mail writings: "These writers often refer to E-mail as holding a

conversation since its informality almost demands that they write the way they talk, breaking down the rigid rules of more formal communication" (Kinkead, 1987, p. 341).

The informal and relaxing environment facilitated communication between the instructor and the students. The students lost the constraints and inhibitions the intended audience provided. They no longer feel bound by formal instructor-student relationship. As one student mentioned in her e-mail journal:

> It is a nice thing that I can talk to you by using my fingers.
> I like to use this way talk with you. This is a very special experience to me. You know? In my country, students have to call teacher "Teacher", sounds very serious. (Ying)

E-mail made the process of communication between the students and the instructor easy and convenient. Some students mentioned that e-mail is fast and convenient. The students and the instructor did not need to coordinate a time to communicate with each other. Both the students and the instructor considered it an advantage that they did not need to deal with paper work when they wrote via e-mail. This added convenience may have encouraged them to write more.

The computer itself probably provided a motivation for the students and the instructor to write more. The instructor and most of the students indicated that they enjoyed working with the computer. Some of the students felt it was fun to write using the computer. Some of the students considered it important for them to learn to use the computer technology. They were willing to spend more time writing with the computer because they felt the task of learning the technology was relevant to their future careers.

TABLE 6. Ranked Comparison of the Means of Language Functions Use by the Students in the Two Groups Per Writing Session

	Frequency of Language Function Use for Each Student	
	Total of Language Function Use	Mean of Language Function Use per Writing Session
E-mail Group		
Ying (47)	768	16.34
Lin (36)	573	14.74
Hiroko (24)	531	14
Toshi (42)	515	13.63
Tamiko (38)	336	13.55
Andi (29)	253	8.72
Paper and Pencil Group		
Shen (37)	379	10.24
MeiMei (27)	333	12.33
Atzko (37)	315	8.51
Hiro (20)	228	11.44

TABLE 7. Ranked Comparison of the Means of the Language Functions Used by the Instructor to the Students in Both Groups Per Writing Session

	Frequency of Language Function Use for Each Student	
	Total of Language Function Use	Mean of Language Function Use per Writing Session
E-mail Group		
Ying (47)	311	6.62
Lin (36)	191	5.31
Hiroko (24)	135	5.63
Toshi (42)	191	4.55
Tamiko (38)	193	5.08
Andi (29)	148	5.10
Paper and Pencil Group		
Shen (37)	142	3.84
MeiMei (27)	93	3.44
Atzko (37)	118	3.19
Hiro (20)	59	2.95

Other Findings

The present study also indicates that e-mail creates a different writing mode. Conversational cues were found in e-mail messages. In e-mail dialogue journals, the students and the instructor used conversational cues such as "Wow", "OOPS", and "Yuck."

(Ying)
Wow! I am very glad since you told me such clear and interesting answers.

(Hiroko)
I will go to the football game on Saturday and also go shopping on Sunday. Besides, my friend when I was high school student will come to Eugene. So I somehow can break off my frustration during this weekend. OOPS!! I have two TEST next week!

(Instructor)
Lice! Yuck! Yuck! Kids in public schools often get this and it is very, very difficult to get rid of it.

The students in the e-mail group in the present study wrote more informally and casually than did the students in the paper-and-pencil group. They wrote as if they were holding a conversation. "Since e-mail often flies between parties at a rate approaching a conversation, and since most people are more comfortable being friendly than combative, many people tend to drift into informality in their electronic messaging" (Krol, 1992, p. 93). Comparing the difference between e-mail writing and paper writing, Hawisher and Moran (1993, p.630) pointed out: "E-mail seems now to employ a language that is somewhere on the continuum between spoken and written language.... But often, e-mail is composed on-line, and rapidly. Typically it is not subjected to the reflective scrutiny we usually give to the language we inscribe on paper."

The sentence structures in the e-mail dialogue journals were looser than those in the paper writings. Indenting, paragraphs, and punctuation were used very casually. The students in the paper group arranged their sentences more carefully, as if they were doing formal writing assignments.

The writing process can also explain the differences between e-mail journals and paper journals. Interviews (both informal and semi-structured) revealed that paper group students used dictionaries and grammar books quite frequently while they were writing dialogue journals. Sometimes, they wrote drafts. E-mail writing requires a high degree of the engagement of mind and hands. An e-mail writing environment does not encourage students to use dictionaries, grammar books or write a draft as it did with the students in the paper group. One e-mail participant used a

dictionary a couple of times at the beginning and gave it up because it slowed him down in his composing. Hiroko was an interesting case. She used to write by using paper and pencil for two weeks and then she volunteered to joined e-mail group. When she wrote by the use of paper and pencil, she always wrote drafts. She spent about 30 to 60 minutes to write her paper journals. When she wrote by the use of e-mail, she did not prepare drafts and she spent less time. When asked whether she wrote the same way by the use of the two different mediums, Hiroko answered that she did not think so.

> *Researcher: Yeah. Because you have this experience, at the beginning, you wrote by using paper and pencil, and then you moved into the computer group. So I want to know what you think. Do you think you wrote the same way by using the two mediums?*
>
> *Hiroko: No.*
>
> *Researcher: Can you tell me the difference?*
>
> *Hiroko: Writing using the paper is to have a time to think. E-mail is, I always can only think about it at this time.*

Here Hiroko pointed out the difference between e-mail dialogue journals and paper dialogue journals: unplanned vs. planned. E-mail writing, like a telephone or face-to-face conversation, is spontaneous

Implications

The results of this study are not conclusive. The sample of the study was obviously limited. However, this project was a success and suggests important implications in utilizing e-mail as a medium to conduct dialogue journaling in ESL classrooms.

E-mail provides an alternative tool for students to use for dialogue journaling. While it is not appropriate to assume that e-mail is the tool that should be used by every student in dialogue journaling, the unique features of e-mail do appeal to some students and thus offer them a choice. E-mail is a handy tool for students who have difficulties in handwriting and who are interested in using computers.

E-mail has evident advantages over paper and pencil when dialogue journaling is conducted outside of class. Many ESL teachers conduct dialogue journaling during class time. However, with limited class time to cover course materials, teachers might find it difficult to devote 15-20 minutes to dialogue journaling each day. E-mail provides an ideal environment for dialogue journaling outside of classroom. It eliminates the problems of having to coordinate a communication time and the hassles of having to deal with paper work.

E-mail can also play a role in changing inappropriate student writing habits. Student writers, especially ESL beginning writers tend to edit their writing prematurely in their writing process. The present study found out that this problem persisted even when the students were doing dialogue journaling, which is a type of freewriting practice. E-mail provides a writing environment which encourages students to put down their thinking as fast as possible without spending too much time agonizing on words, phrases, grammar and sentence structures. ESL students can use e-mail to get used to freewriting and practice their writing fluency, by just focusing on communication.

E-mail dialogue journaling in the present study was conducted between the instructor and the student. However, the unique features of e-mail can easily expand the dialogue journal beyond the range of the student and the instructor. During the interviews, the students in the present study expressed a strong desire to communicate with each other via e-mail. In doing e-mail dialogue journaling, the students can be paired with other students at a higher language level. The students also can be paired with other competent language users on or off the campus. In this way, e-mail offers the opportunity for ESL students to interact with more people with whom they are interested and who can help them in their written language acquisition.

The discussion of the potential of e-mail in writing must also take into consideration the continuing rapid changes in computer technology. Voice input to computers is just now becoming available at a price that an ESL lab can afford. Such voice input can be used to produce a text message that can then be sent via e-mail system. When the students can actually speak to the computer and the computer types the message for the students, when the students can not only read the message, but also be able to hear the message, how is that going to affect the production of written language?

Stotsky (1983) postulates that the relationship among the language skills is not only reciprocal, but also multidirectional. She considered that all four language skills (reading, writing, speaking and listening) influence each other and enhance each other. If this theory is valid, we can expect that the availability of voice input in an e-mail system will not only enhance the development of the writing skills of ESL students, but will also enhance the development of the speaking and listening abilities of ESL students.

Guistein (1983) stated that the fluent writer uses language functions appropriately in a wide range of contexts. E-mail provides students another context in which they need to achieve competence. E-mail is an important communication medium in the real world. Students should be prepared for an e-mail communication environment. "We need to introduce them to e-mail as an aspect of the work environment" (Hawisher & Moran, 1993, p. 638).

At the present time, the use of e-mail is increasing at a speed of over 300,000% a year (Stonehill, 1993), however, "the acceptance of e-mail in academic setting has been less than lukewarm" (D'ouza, 1991, p. 106). In the field of composition, "electronic mail has received scant attention" (Hawisher & Moran, 1993, p. 627). E-mail is largely used as a personal communication tool among faculty members and researchers. The function and impact of e-mail as an instructional tool have not been adequately explored. The present study suggests that e-mail is a valuable tool in a writing class. As Hawisher and Moran (1993, p. 638) pointed out: "We writing teachers need to pay attention to e-mail in our writing classes because it is here, because it is a means of written communication, and because we as academics are using it. E-mail, we believe, deserves a place in the curriculum."

REFERENCES

Baron, S. N. (1984, Spring). Computer mediated communication as a force in language change. Visible language, 18 (2), 118-141.

Blanton, L. L. (1987). Reshaping ESL students' perceptions of writing. ELT Journal, 41 (2), 112-118.

Bolton, W. (1991, October). CmC and e-mail: Casting a wider net. English Today, 7 (4), 34-38.

Cohen, M., & Miyake, N. (1986). A worldwide intercultural network: Exploring electronic messaging for instruction. Instructional Science, 15, 257-273.

D'Souza, V. P. (1991, Summer). The use of electronic mail as an instructional aid: An exploratory study. Journal of Computer-Based Instruction, 18 (3), 106-110.

Daiute, C. (1985). Writing and computers. Reading, MA: Addison-Wesley.

Downing, E. T., Schooley, C. L., Matz, M. E., Nelson, N. L., & Martinez, R. (1988, January). Improving instructor/student interaction with electronic mail. Engineering Education, 247-250.

Dubin, F. (1991, January). Checking out e-mail and the fax. English Today, 7 (1), 47-51.

Grabowski, B., Suciati, & Pusch, W. (1990). Social and intellectual value of computer-mediated communications in a graduate community. Educational and Training Technology International, 27 (3), 276-283.

Gross, J. F. (1990, April). Learning partnership through dialogue journals: Applying non-hierarchic Assumptions in the Classroom. (ERIC Document Reproduction Service No. ED 322 767)

Gunkel, J. (1991, April). "Please teach America": Keisuke's journey into a language community. Language Arts, 68, 303-310.

Gutstein, S. (1983, March). Using language functions to measure fluency. (ERIC Document Reproduction Service No. ED 240 871)

Hartman, K., Neuwirth, M. C., Kiesler, S. Sproull, L., Cochran, C. Palmquist, M., & Zubrow, D. (1991). Patterns of social interaction and learning to write. Written Communication, 18 (1), 79-113.

Hawisher, G. E, & Moran, C. (1993, October). Electronic mail and the writing instructor. College English, 55 (6), 627-643.

Jenkinson, E. (1992). A Professor Responds by Computer to the Writing of Elementary Students. (ERIC Document Reproduction Service No. ED 341 061)

Jones, P. M. (1988). Knowing opportunities: Some possible benefits and limitations of dialogue journals in adult second language instruction. (ERIC Document Reproduction Service No. ED 324 907)

Kiesler, S., Siegel, J., & McGuire, T. W. (1984, October). Social psychological aspects of computer-mediated communication. American Psychologist, 39 (10), 1123-1134.

Kinkead, J. (1987). Computer conversation: E-mail and writing instruction. College Composition and Communication, 38 (3), 337-341.

BEST COPY AVAILABLE

Krol, Ed. (1992). The whole internet: user's guide & catalog (1st ed.). Sebastopol, CA: O'Reilly & Associate.

Murray, D. (1991). Conversation for action: The computer terminal as medium of communication. Amsterdam: John Benjamins.

Peyton, J. K, & Seyoum, M. (1989). The effect of teacher strategies on students interactive writing: The case of dialogue journals, Research in the Teaching of English, 23 (3), 310-334.

Peyton, J. K., Staton, J, Richardson, G., & Wolfram, W. (1990, May). The influence of writing task on ESL students' written production. Research in the Teaching of English, 24 (2), 142-171.

Reyes, M. L. (1991). A process approach to literacy using dialogue journals and literature logs with second language learners. Research in the Teaching of English, 25 (3), 291-313.

Rice, R. E. & Case, D. (1983). Electronic messages systems in the university: A description of use and utility. Journal of Communication, 33 (1), 131-152.

Rinvolucri, M. (1983, January). Writing to your students. ELT Journal, 37 (1), 16-21.

Schaefermeyer, M. J. & Sewell, Jr. H. E. (1988, November/December). Communicating by electronic mail. American Behavioral Scientist, 32 (2), 112-123.

Sherblom, J. (1988, Fall). Direction, function, and signature in electronic mail. The Journal of Business Communication, 25 (4), 39-54.

Shuy, W. R. (1982). Sentence level language functions. In J. Staton, R. W. Shuy & J. K. Peyton (1982). Dialogue journal writing as a communicative event. National Institute of Education. NIE-G-80-0122. Washington, DC: Center for Applied Linguistics. (ERIC Document Reproduction Service Nos. ED 214 196; ED 214 197)

Shuy, W. R. (1988). Sentence level language functions. In J. Staton, R. W. Shuy, J. K. Peyton & L. Reed (1988) Dialogue journal communication: Classroom, linguistic, social and cognitive views (pp. 107-141),. Norwood: Ablex.

Soh, B. L., & Soon, Y. P. (1991). English by e-mail: Creating a global classroom via the medium of computer technology. ELT Journal, 45 (4), 287-292.

Spack, R., & Sadow, C. (1983). Student-teacher working journals in ESL freshman composition. TESOL Quarterly, 17 (4), 575-593.

Staton J., Shuy, W. R., Kreeft, J. (1982). Dialogue journal writing as a communicative event. National Institute of Education. NIE-G-80-0122. Washington, DC: Center for Applied Linguistics. (ERIC Document Reproduction Service Nos. ED 214 196; ED 214 197)

Staton, J. (1988). Dialogue journals in the classroom context. In J. Staton, R. W. Shuy, J. K. Peyton & L. Reed. (Eds) Dialogue journal communication: Classroom, linguistic, social and cognitive views (pp. 33-55). Norwood, NJ: Ablex.

Steer, J. (1988, March). Dialogue journal writing for academic purposes. (ERIC Document Reproduction Service No. ED 297 479)

Stonehill, B. (1993, December 31). The colossal hold of e-mail. The Los Angeles Times, p. B7

Stotsky, S. (1983). A meaningful model of writing language development for teachers. In P. Stock (Ed), Efroum: Essays on theory and practice in the teaching of writing (pp. 194-201). Upper Montclair, NJ: Boynton/Cook.

Urzua, C. (1987, June). "You stopped too soon": Second language children composing and revising. TESOL Quarterly, 21 (2), 279-304.

Venditti, P, & Bahruth, R. (1986, July). Enhancing communicative competence and cultural adaptation of ESL students: Using dialogue journals and interactive errands. (ERIC Reproduction Service No. ED 275 132)